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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,602	10/20/2003	Geoffrey Canright	240244US28	1909
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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER NGUYEN, MERILYN P	
			ART UNIT	PAPER NUMBER
			2163	

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/687,602

Applicant(s)

CANRIGHT ET AL.

Examiner

Merilyn P. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/23/03 & 8/16/04 & 03/23/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Detailed Action.

DETAILED ACTION

1. Claims 1-37 are pending in this office action.
2. PCT/US04/30908 is a continuation of this application.

Claim Objections

3. Claim 25 is suggested to write as separate claims for each of it depends on.

Specification

4. The disclosure is objected to because of the following informalities: The title is lengthy.
Appropriate correction is required.

Drawings

5. Figures 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1, 7, 13, 19, 26 and 32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basic of this rejection is set forth in a two-prong test of:

(1) whether the claim is directed to a judicial exception (law of nature, natural phenomena, or an abstract idea) which would make it non-statutory if it is directed to the exception itself, rather than a practical application of the exception. One way a practical application can be established is through claiming a physical transformation (data transformation is not a physical transformation and is not, in and of itself, evidence of statutory subject matter).

(2) Where there is no physical transformation being claimed, a practical application would be established by a useful, concrete and tangible result. That result is useful if it has specific, substantial and credible utility. Make a determination whether such is the case based on the perspective of one of ordinary skill having read the claim in light of the disclosure. It's concrete if it produces an assured, repeatable result (e.g., same input produces the same output each time the steps are performed). For it to be a tangible result, it must be more than just a thought or a computation. Instead, it must have real world value rather than being an abstract result.

In the present case, claimed invention (Claims 1, 13, 26, and 32) recites a method of ranking the relevance of a node in a linked set of nodes comprising determining steps which do not provide concrete and tangible results. The claims determine an authority-like weight and a hub-like weight, however there are no assured, repeatable outcomes/results from these steps. The claim also contains non tangible result as it only recites an abstract idea. The recited steps

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of merely determining an authority-like weight and determining a hub-like weight does not apply, user, or advance the technological arts since all of the recited steps can be performed in the mind of the user. These steps only constitute an idea of how to rank the relevance of a node. In order for claim to be tangible, it must be more than just a thought or computation and must have real world value.

Claims 7 and 19 are not concrete. It provides a system for ranking the relevance of a node in a linked set of nodes comprising a calculator calculating authority-like weight and a hub-like weight without producing any assured, repeatable result from the calculations. Claim 19 is further not tangible. A relay module is a program that not tangible embodied on a computer readable program.

Claim 25 is not tangible because a computer program product is not tangible embodied on a computer readable medium.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-24 and 26-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 13, there are no steps given to arrive the method of ranking the relevance of a node in a linked set of nodes. The preamble recites the method of ranking the

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relevance of a node in a linked set of nodes. However, the preamble of the claims recites determining steps which provide no results and how nodes (documents) are ranked.

Regarding claims 1-3, 7, 13-15, 19, 26-28 and 32-34, the phrase "authority-like" and "hub-like" render the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by " authority-like" and "hub-like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Regarding claims 1 and 4-6, these claims are incomplete for omitting essential structural cooperative relationships of elements. See MPEP § 2172.01. The omitted structural cooperative relationships are: Claims recite determining, selecting, displaying and ranking steps that are not related to each others. For example, how the determining steps are being connected to arrive the method of ranking and how selecting a search term relates to method of ranking (Claims 1, 4-5). Moreover, the step of "displaying a ranking result" (claim 5) is incomplete because there are no steps given to arrive a ranking result thus no way to display a ranking result that is not generated. Claim 6 recites, "ranking the textual content of the node" which is incomplete as how the textual content of the node is ranked.

Regarding claims 2-3 and 14-15, there is insufficient antecedent basis for "said determining an authority-like weight of a node" (claims 2 and 14) and "said determining a hub-like weight of a node" (claims 3 and 15). It's unclear whether "a node" is new node or the node recited in claims 1 and 15.

Regarding claims 8-10, 20-22, there is insufficient antecedent basis for "a calculator". It's unclear whether "a calculator" is "a calculator" recited in claim 7 and 19.

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Regarding claims 7, 11-12, 19 and 23-24, these claims are incomplete for omitting essential structural cooperative relationships of elements. See MPEP § 2172.01. The omitted structural cooperative relationships are: a calculator, a search term selection device, a display and a textual content ranking mechanism are not connected to each other. The Examiner hardly figures out how these elements are being connected to support the ranking function.

Regarding claims 13 and 16-18, these claims are incomplete for omitting essential structural cooperative relationships of elements. See MPEP § 2172.01. The omitted structural cooperative relationships are: Claims recite determining, selecting and ranking steps that are not related to each others. For example, how the determining steps are being connected to arrive the method of ranking and how selecting a search term relates to method of ranking (Claims 13, 16-17). Moreover, claim 18 recites “ranking the textual content of the node” is incomplete as how the textual content of the node is ranked.

Regarding claims 26, 29-32 and 35-37, these claims are incomplete for omitting essential structural cooperative relationships of elements. See MPEP § 2172.01. The omitted structural cooperative relationships are: means are not connected to each other as how these means are being related to support the ranking function.

Regarding claims 27-28 and 33-34, there is there is insufficient antecedent basis for “said means for determining an authority-like weight of a node” (claims 2 and 14) and “said means for determining a hub-like weight of a node” (claims 3 and 15). It’s unclear whether “a node” is new node or the node recited in claims 26 and 32.

Regarding claims 1, 7, 19 and 26, the term “mathematically decoupled” renders the claims indefinite because it’s vague as to what’s being mathematically decoupled.

Due to the vagueness and a lack of clear definition of the terminology and phrases used in the specification and claims, the claims have been treated on their merits as best understood by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 4-7, 10-13, 16-19, 22-26, 29-32 and 35-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Chakrabarti (US 6,356,899).

Regarding claims 1 and 26, Chakrabarti discloses a method and a system for ranking the relevance of a node in a linked set of nodes (See col. 8, lines 35-59 and col. 9, lines 59-64), comprising:

- determining an authority-like weight for said node using a non-compound, non-normalized Forward operator (See col. 20, lines 30-45); and
- determining a hub-like weight for said node using a non-compound, non-normalized Backward operator (See col. 20, lines 30-47),
- said steps of determining being mathematically decoupled (See col. 19, lines 34-50).

Regarding claims 4, 16 and 29, Chakrabarti further discloses determining a principal eigenvector of a matrix (See col. 19, lines 27-29).

Regarding claims 5, 17 and 30, Chakrabarti further discloses selecting a search term (See col. 25, line 51 to col. 26, lines 1-3); and displaying a ranking result (See Fig. 6).

Regarding claims 6, 18 and 31, Chakrabarti further discloses ranking the textual content of the node (See col. 19, lines 55-65).

Regarding claims 7 and 19, Chakrabarti discloses system for ranking the relevance of a node in a linked set of nodes comprising:

- a calculator configured to calculate an authority-like weight for said node and a hub-like weight for said node, using, respectively, a non-compound, non-normalized Forward operator and a non-compound, non-normalized Backward operator (See col. 20, lines 30-47), said calculations being mathematically decoupled (See col. 19, lines 34-50).

Chakrabarti also discloses a relay module connected to said calculator and configured to relay a corresponding calculated authority-like weight and hub-like weight to a display as per claim 19 (See Fig. 6).

Regarding claims 10 and 22, Chakrabarti discloses said calculator comprising:

a calculator configured to calculate a principal eigenvector of a matrix (See col. 19, lines 27-29).

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Regarding claims 11 and 23, Chakrabarti further discloses a search term selection device (See col. 25, line 51 to col. 26, lines 1-3); and a display (See Fig. 6).

Regarding claims 12 and 24, Chakrabarti further discloses a textual content ranking mechanism (See col. 19, lines 55-65).

Regarding claims 13 and 32, Chakrabarti disclose a method and a system for ranking the relevance of a node in a linked set of nodes, the improvement comprising:

- means (See col. 6, lines 31-52) for determining one of an authority-like weight for said node using a non-compound, non-normalized Forward operator, and a hub-like weight for said node using a non-compound, non-normalized Backward operator (See col. 20, lines 30-47).

Regarding claims 16 and 35, Chakrabarti further discloses means for determining a principal eigenvector of a matrix (See col. 19, lines 27-29).

Regarding claims 17 and 36, Chakrabarti further discloses means for selecting a search term (See col. 25, line 51 to col. 26, lines 1-3).

Regarding claim 18 and 37, Chakrabarti further discloses means for ranking the textual content of the node (See col. 19, lines 55-65).

Regarding claims 25, Chakrabarti discloses a computer program product configured to host instructions corresponding to any one of the steps of Claims 1-6 and 13-18 (See col. 24, lines 19-65).

Allowable Subject Matter

9. Claims 2, 3, 8, 9, 14, 15, 20, 21, 27, 28, 33 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 2, 14, 27 and 33 recite the limitation of “wherein said determining an authority-like weight of a node comprises:

- choosing a forward start vector;
- determining a node weight using the non-compound, non-normalized Forward operator;
- normalizing the node weight; and

testing for convergence, wherein said steps of determining a node weight and normalizing the node weight are repeated until the node weight converges to a constant value” that is not taught or suggested by the prior art.

Claims 3, 15, 28 and 34 recite the limitation of “wherein said determining a hub-like weight of a node comprises:

- choosing a backward start vector;

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- determining a node weight using the non-compound, non-normalized Backward operator;
- normalizing the node weight; and
- testing for convergence, wherein said steps of determining a node weight and normalizing the node weight are repeated until the node weight converges to a constant value” that is not taught or suggested by the prior art.

Regarding claims 8 and 20, these claims recite the step of iteratively calculating a node forward weight, normalizing the node forward weight, and testing for convergence until the node forward weight converges to a constant value that is not taught or suggested by the prior art.

Regarding claims 9 and 21, these claims recite, “iteratively calculate a node backward weight, normalize the node backward weight, and test for convergence until the node backward weight converges to a constant value” that is not taught or suggested by the prior art.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant’s disclosure.

Bharat U.S Patent No. 6,738,678 discloses method for ranking hyperlinked pages using content and connectivity analysis.

Aridor U.S Patent No. 6,636,848 discloses information search using knowledge agents.

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Ziyang Wang discloses, "Improved Link-Based Algorithms for Ranking Web Pages", (June 2003).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marilyn P Nguyen whose telephone number is 571-272-4026.

The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



MN
December 09, 2005


FRANTZ COBY
PRIMARY EXAMINER